SANTA CRUZ BIOTECHNOLOGY, INC.

Bad (C-7): sc-8044

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Bcl-2 family of proteins is characterized by its ability to modulate cell death (apoptosis) under a broad range of physiologic conditions. Bcl-2 and several related proteins function to inhibit apoptosis, while other members of the Bcl-2 family, such as Bax and Bak, enhance cell death under various conditions. For instance, Bcl-x_L represses cell death, while its shorter form, Bcl-x_S, promotes apoptosis. A protein designated Bad exhibits homology to Bcl-2, limited to the BH1 and BH2 domains. Bad functions to dimerize with Bcl-x_L and with Bcl-2, but not with Bax, Bcl-x_S, Mcl-1, A1 or itself. In mam-malian cells, Bad binds with greater affinity to Bcl-x_L than to Bcl-2, and reverses the death repressor activity of Bcl-x_L but not Bcl-2. Dimerization of Bad with Bcl-x_L results in displacement of Bax from Bcl-x_L: Bax complexes, thereby causing restoration of Bax-mediated apoptosis.

CHROMOSOMAL LOCATION

Genetic locus: BAD (human) mapping to 11q13.1; Bad (mouse) mapping to 19 A.

SOURCE

Bad (C-7) is a mouse monoclonal antibody raised against amino acids 1-168 representing full length Bad of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Bad (C-7) is available conjugated to agarose (sc-8044 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8044 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8044 PE), fluorescein (sc-8044 FITC), Alexa Fluor® 488 (sc-8044 AF488), Alexa Fluor® 546 (sc-8044 AF546), Alexa Fluor® 594 (sc-8044 AF594) or Alexa Fluor® 647 (sc-8044 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-8044 AF680) or Alexa Fluor® 790 (sc-8044 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

Bad (C-7) is recommended for detection of Bad of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Bad siRNA (h): sc-29778, Bad siRNA (m): sc-29779, Bad shRNA Plasmid (h): sc-29778-SH, Bad shRNA Plasmid (m): sc-29779-SH, Bad shRNA (h) Lentiviral Particles: sc-29778-V and Bad shRNA (m) Lentiviral Particles: sc-29779-V.

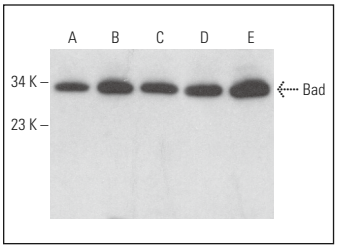
Molecular Weight of Bad: 25 kDa.

Positive Controls: ARPE-19 whole cell lysate: sc-364357, PC-3 cell lysate: sc-2220 or C2C12 whole cell lysate: sc-364188.

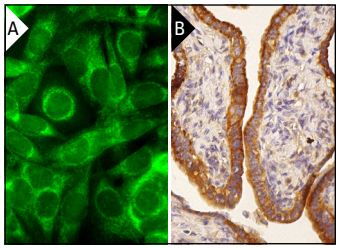
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Bad (C-7): sc-8044. Western blot analysis of Bad expression in ARPE-19 (**A**), PC-3 (**B**), C2C12 (**C**), A-10 (**D**) and C6 (**E**) whole cell lysates.



Bad (C-7) Alexa Fluor® 488: sc-8044 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing mitochondrial and cytoplasmic localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (**A**). Bad (C-7): sc-8044. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Fischer, R., et al. 2001. Expression of the peripheral-type benzodiazepine receptor and apoptosis induction in hepatic stellate cells. Gastroenterology 120: 1212-1226.
2. Luan, Y.P., et al. 2018. Tsoong induces apoptosis and inhibits proliferation, migration and invasion of pancreatic ductal adenocarcinoma cells. Mol. Med. Rep. 17: 3527-3536.
3. Yadav, R.K., et al. 2019. α-linolenic acid based nano-suspension protect against lipopolysaccharides induced mastitis by inhibiting NFκBp65, HIF-1α, and mitochondria-mediated apoptotic pathway in albino Wistar rats. Toxicol. Appl. Pharmacol. 377: 114628.
4. Tsai, B.C., et al. 2020. Functional potato bioactive peptide intensifies Nrf2-dependent antioxidant defense against renal damage in hypertensive rats. Food Res. Int. 129: 108862.
5. Casili, G., et al. 2021. The protective role of prolyl oligopeptidase (POP) inhibition in kidney injury induced by renal ischemia-reperfusion. Int. J. Mol. Sci. 22: 11886.
6. Jiao, J., et al. 2022. Expression of STING is increased in monocyte-derived macrophages and contributes to liver inflammation in hepatic ischemia-reperfusion injury. Am. J. Pathol. 192: 1745-1762.
7. Basilotta, R., et al. 2023. Therapeutic potential of dimethyl fumarate in counteract oral squamous cell carcinoma progression by modulating apoptosis, oxidative stress and epithelial-mesenchymal transition. Int. J. Mol. Sci. 24: 2777.
8. Park, Y.J., et al. 2024. Effect and mechanisms of Gambi-jung against high-fat diet-induced cardiac apoptosis in mice. Heliyon 10: e29161.

RESEARCH USE

For research use only, not for use in diagnostic procedures.